Article

Sustainable Agricultural Branding in Digital Asia: A Comparative Analysis of TWG Singapore and the Tea Industry in Guizhou, China

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Abstract: Information Technology brings significant challenges to agriculture in worldwide. Advanced processing technologies can decrease the already-low labor costs. Tea is one of Asia's most significant and lucrative crops, significantly improving remote regions by reducing poverty and securing food for many developing countries. Although the export of tea in Guizhou, China, has grown more in recent years, the volume and value of export are still low and emerging. As a comparative case study, the Singaporean company TWG Tea provides a meaningful blueprint for other tea industries in Asia, particularly regarding agricultural product branding. This research aims to understand better the tea handling strategies that support sustainable crop manufacturing in comparable Agri-ecologies. It helps recognize digital DNA and effective branding strategies using "7P": product, professionalism, place, partnership, performance, patent, and people. By using results from the TWG brand and new applications of IoT, Agribusiness can provide reliable product traceability to ensure a higher level of product quality, integrity, and availability. The implications for tea have been discussed throughout the industry while improving the quality of raw materials in an environmentally-friendly way, creating new partnerships, offering custom-made services or products, adjusting market strategy and quality evaluation systems, and ensuring product traceability in a Big Data environment.

Keywords: Agriculture; Big Data; Branding strategy; New tea; 7P

1. Introduction

The research aims to establish an improved understanding of the hazards and inefficiencies of in-season handling strategies that would support the advancement of sustainable crop manufacturing in comparable Agri-ecologies. Although the export of tea in Guizhou, China, has grown in recent years, the volume and value of export are still relatively low. Therefore, it is important to empower the sustainable development of tea exports in Guizhou by exploring development strategies after investigating the advantages and weaknesses of tea exports in Guizhou, the prospects and threats confronted.

The TWG Tea brand is a solid example of how to shape a typical, worldwide extravagant brand. Luxury brands provide an exclusive experience for selective customers for whom the price is not a factor. This segment of customers is pursuing elite treatment (Huang & Xiao, 2016) which was vital to the TWG brand through precise brand positioning. The case of TWG can provide meaningful insights for tea industry in Asia regarding agricultural product branding. This study aims to recognize the branding strategies that expand the values of the agricultural products focusing on the branding strategies affecting the brand

performance. It looks at ways to incorporate 7Ps of international branding in agriculture in the era of technology upgrading.

2. Literature Review

Blockchain technology combines cryptography, computer science, economics, and operations research. In some agricultural regions, blockchain technology has contributed to achieving the traceability of cultivated products. This traceability involves many links like planting, warehousing, logistical processing, sales, and querying (Wu et al., 2021). The efficient cooperation between various links can ensure the effective traceability of agricultural products. The digital industry is characterized by advanced technology, added value, and rapid development speed (Yan, 2010). In certain industries, digital infrastructure and communications technology allow buyers and sellers to be better linked together, which is completely different compared from before (Salo et al., 2020).

On the other side, this digital age with the new information technology also brings severe challenges to agriculture. For instance, these advanced processing technologies have impacted the regions with already lower labor costs, leading to job cuts. Economic globalization increases in the number of multinational companies, and factors like low-price competition and technology monopoly may harm the development of the local agriculture industry (Henryks et al., 2016). However, with increased public consumption, the consumers' focus has shifted from food price to high quality. Cost-effective agricultural products can get more recognition from consumers (Wang et al., 2020). Since the digital methods let "information" become the keyword (Malyuk & Gavdan, 2019), the leaders are able to use more traceable-information and element-linked model to accurately obtain market demand for better products (Awa et al., 2010).

Strategically, a crucial challenge of contemporary agriculture in rural areas is the ability to develop the agricultural industry with effective and efficient supply chain following the sustainable values so that the present and upcoming generations can benefit from them. Interactive competence plays a facilitating role in improving the functioning of agricultural enterprises and expanding farmers' income (Yin & Wu, 2015). Blockchain technology can provide traceability of the food supply chain. It can keep track of all phases of production, dealing, and delivery as defined by the European Union Food Law (Isabel, 2020). The digital services and technologies can enhance the productivity in agriculture by expanding agriculture sustainably on the development of digitalization in agriculture (Fidanska et al., 2020).

3. Methodology

This research conducts comparative case studies on TWG, a tea brand as well as a company name from Singapore, and the tea industry in Guizhou, China. Guizhou is one of the origins of tea plants. Tea has become the largest agricultural export for Guizhou. The 7P branding strategy is very useful in this era of digitalization. By Learning from TWG's brand and taking advantage of new applications of IoT, agribusiness, including the tea business, can provide reliable product traceability to ensure a higher level of product quality.

4. Results

4.1 The Case of TWG

TWG Tea has successfully structured a profound luxury brand by strategizing the product, professionalism, place, partnership, performance, patent, and people that build brand loyalty.

Strategy of Product

TWG Tea has shaped an insight of being a luxury in the customers' eyes by providing supervisorial teas, massive choices of products, and incomparable in-store environments. The founder of TWG tea chose Singapore as their base due to free trade, and its location is near to tea gardens and producers, such as China, India, Nepal, Sri Lanka, and Myanmar. Blending and packing is finished in Singapore (Nakano & Shinozaki, 2018). The brand produces white, green, yellow, black, matured (PU-ERH tea), blue (OOLONG), and many different blended teas (Wolfe, 2022). The classification includes loose and packaged teas, teabags, iced teabags, Haute couture tea varieties, and other tea series (Huang & Xiao, 2016).

The unique selling point of TWG Teas is that they invest in high-quality tea products, whereas many other tea companies invest in advertising and promotions. This approach was developed after the misfortune of the Asian Financial Crisis in 2007. Product pricing is one of the important elements of TWG Tea for branding. The brand's target segment are the customers pursuing a luxurious tea experience. They pay more attention to high value than price. While opening a new market, TWG adjusts its strategy (Roll, 2019) so customers could buy teas from shops with prices ranging from S$20 to S$900.

The product packaging is perceived as important as TWG's product. Every exquisite package is designed by in-house designers. The designers can be considered as innovators because the design is based on seasons, trends, and a country's culture and customs (Roll, 2019). In-house designers are better because they are familiar with brand strategies and know what their customers want from the brand. The interior decoration of stores also distinguishes their product from other tea brands. A spectacular tea wall, vintage-style counters, and good collections of their signature teacups and teapots are a marvelous way for customers to experience the selection of teas and blends (Hu & Wu, 2021).

Strategy of Professionalism

In TWG Tea salons, every staff member is trained by the TWG Tea Institute, regardless of whether they work in the salon, kitchen, office, or warehouse. TWG invests $658,000 annually for employee training in Singapore region alone (Escobedo, 2018). The training courses mainly focus on tea gastronomy, luxury service, and communication (Nakano & Shinozaki, 2018). Collecting information on customers' tastes and preferences is a vital job element at TWG. Customer feedback from front-line managers will be sent to the global suppliers and tea plantations. This feedback will be reflected in the production line for a long time which can keep high-quality products sold in global branches. An effective feedback channel can directly influence the production process (Ma, 2015). For example, launching new e-training courses for staff worldwide, providing E-brand Experience workshops, teaching providers how to deliver beliefs during a pandemic or developing training certificates for staff (Alimin, 2021).

Strategy of Place

Becoming familiar with local culture, customs, and the special habits of a new territory will help ensure branding with a quick pace. A unique place strategy is the branding strategy that uses exclusivity in different countries such as the UK and Asia. After more than 400 years of tea culture in the UK, tea is a lifestyle for British people. Tea has changed British society both economically and politically. To build a new market in the UK, TWG applies the strategy of place which must coincide with Britain's favorite strong black tea. However, tea is a daily essential in the Asia market. It is the birthplace of tea. Unlike the UK market, people are more eager to try all kinds of teas, such as green, yellow, blue, black, and matured teas. Since China already has a strong tea culture, many tea companies ignore other countries (Cotton, 2018). Singapore's Breakfast Tea combines green and black

teas, assorted with ginger and orange crusts. It is the most popular tea in Singapore (Roll, 2019). TWG has successfully enhanced its image as Singapore Tea with other luxury brands whose identities have been strengthened by the origins of tea.

Strategy of Partnership

Choosing a reliable partnership is based on the brand positioning and customers' requirements. Matching the brand strategy of first-class quality with uniqueness, TWG targets high-level division stores internationally. For example, Leicester Square in London, up-market departmental store David Jones in Australia, The Emporium in Thailand, IFC Mall in Hong Kong, Dubai Mall in UAE, and GUM in Moscow (Roll, 2019). TWG carefully and selectively choose distributions to share its brand. The brand cooperates with international 5-star hotels, airlines, and some renowned restaurants. During the COVID-19 pandemic, TWG Tea quickly adjusted policies and procedures to help travel retailers get through that situation. The brand chose third-party marketplaces as partnerships to deliver its brand. These marketplaces are innovative, creative, and enthusiastic. They have similar brand briefs, know brand positioning, and respect authentic brand requirements (Alimin, 2021).

Strategy of Patent

Any company expanding its map or thinking of acting against competitors should consider patents and trademarks for their strategies. Protective patents and trademarks are related to intellectual property. A high-profile patent and trademark highlight a company's good reputation (Lim & Baharudin, 2015). Since the launch of TWG Tea in 2008, the brand has committed to patent fortification.

Strategy of People

As significantly vital people to TWG, the customers' royal commitment to TWG is connected to an in-store experience. This is one success factor that gives customers an elegant experience in the salon. The brand provides symbolic value, and exclusive store experiences for customers perceived as a distinguishing factor (Liu & TWG Tea, 2018). It makes customers as exclusive as other luxurious brands since teas are served in a way enhancing both physical and mental health. Its gentle supplies are positioned in the finest outlets and extravagant hotels which connect the products to a certain group of people who promote the similar values or lifestyles. The stores also provide lunch and afternoon tea menus encouraging customers to have an in-store experience. This gives people the idea that having tea is an excellent way to relax and enjoy the time. The consumption of tea by the customers contributes to brand design. For better communicating the tea brand with customers, it is necessary to distribute brand books to promote the history and culture of teas (Ma, 2015). The above approaches encouraging the customers to experience tea scan develop the customers' commitments.

TWG cares for its staff. It is reflected in the invested cost of the training and the training content. TWG Tea also makes contributions to charities, such as Make-a-Wish Foundation Singapore (Harini, 2018). The brand made a marketing and PR manual for their team and partners. All guidelines for all operational procedures include infusion methods for all 800 varieties of tea (Escobedo, 2018). During the pandemic, TWG's travel retailers got dynamic hits for their profits. TWG changed its brand strategy for them, launching new online stores in third-party marketplaces and cooperating with online travel retail platforms such as ishopChangi and KrisShop. Customers can shop online, and teas will be delivered to their homes (Alimin, 2021). The contribution of TWG not only creates a good brand reputation but also gives customers a feeling of higher status.

During COVID-19, TWG's rapid adjustment demonstrated their attention to high social responsibilities and their people-oriented motivations.

Although TWG is already a huge success, two suggestions exist for this marvelous tea brand especially for China market. First, the development of new products for the young generation is essential for the sustainable growth of the brands. It requires additional exploration and development. New style teas have appeared recently, like ready-to-drink milk tea or red tea. In China, tea consumption is 200% of the coffee market. For the young clientele, they have developed a fresh tea-base fused with milk, cream cheese, fruit, and toppings. This took China into a new-style-tea era in 2015. It is different from Chinese ancestors who had a traditional way of drinking. Those new style teas match the requirements of the young, who are more focused on innovation, fashion, and trends. It also reflects a new lifestyle in China. TWG can also get many good hints from this new trend. Secondly, it is important to develop the growing or potential new markets. China has a long tea culture and a growing demand for high-end tea. Consumers do not know much about tea-products and tea-culture outside China. TWG should examine Chinese values further, then take tea culture to Chinese in an acceptable way.

4.2 The Case of the Tea Industry in Guizhou

Guizhou is one of the origins of tea plants. Tea has become the largest agricultural export of Guizhou. As of 2020, the total area for tea plantations in Guizhou Province is around 4667 million square meters, accounting for 15.2% of the total national area (Chen, 2021). There are nearly 5,746 tea enterprises, including 10 countrywide chief enterprises, positioning second in China and 19.6% of the national total producing annual output value of tea around 43.6 tons (Chen, 2021). With the in-depth industrial transformation and continuous improvement of brand competition, tea is becoming a new force leading the export of agricultural products in Guizhou.

The Previous Success and its Strategies of the Tea Industry in Guizhou

Guizhou is one of the origins of tea plants. It has the largest number and widest distribution of ancient tea plants. Its unique natural geographic environment and rich genetic diversity is regarded as a treasure trove of tea plant resources. It is the province with the richest distribution of tea plant species other than Yunnan. The naturally formed groups of ancient tea plants and the shrub-type tea plants account for more than 80% (Chen, 2021). The oldest shrub-type small and medium leafy ancient tea plant with the largest ground diameter is found in China, making it the largest shrub-type ancient tea population.

Environmental advantages include low latitude, high altitude, less sunlight, more clouds and fog, and no pollution throughout the highland tea zones. Low latitude and high-altitude lead to huge temperature difference between the days and nights. Quality advantage refers to the quality and safety of tea and maintaining the self-purification of the ecological environment with the ecological construction mode of compatibility between the tea plants and the forests. It puts forward the prohibition on glyphosate and water-soluble pesticides in tea plantations for the first time. The prohibited pesticides for tea plantations in Guizhou follow EU and Japan's standards. The amount of prohibited pesticides has been enlarged. Guizhou tea has the inherent advantage of good and safe quality. The average aqueous extract content of green tea in Guizhou is higher than the national standard. The amino acid content is also higher than the nation's average.

The Challenges and Opportunities of the Tea Industry in Guizhou

One of the challenges for Guizhou's tea industry is its non-familiarity with the international market and standards. Guizhou is located on the mainland and is relatively feeble regarding foreign trade business. The main problem is that the international market is not

well understood, especially the foreign sales processes. Also, there are few agents for foreign sales, and the profit margin for OEM is small. The foreign sales of tea enterprises in Guizhou are mainly for OEM processing. Small profits and the high cost of foreign sales result in a problematic situation for tea enterprises. The management of tea plantations is unscientific, and the manufacturing expense is enormous. The enterprises in Guizhou have difficulty operating with insufficient manpower, materials, and resources. Tea picking in mountainous areas relies on manpower, resulting in high production costs. Not many enterprises possess export licenses. Few enterprises in Guizhou are eligible for export, and many are at the low end of the industry chain. They account for a tiny part of the national export volume, which lagged the external publicity of Guizhou tea culture (Wang et al., 2021b).

Promoting the Place and People of Guizhou through Strengthening the Foreign Communication of "a series of Guizhou Tea"

Guizhou Province consists of 53 ethnic minorities, including Miao, Dong, and other minorities. Different ethnic groups have different languages, cultures, and ways of drinking tea (Wang, 2018). To gain recognition for the tea culture abroad, international marketing of local culture, humanistic connotation, and a national image are needed. This requires a deep study of the cultural connotations of the original text, and adjustments and expressions specific to the audience (Liang et al., 2020). Under the influence of the "Belt and Road", it is also necessary to combine the local cultural characteristics of each country and accurately master the central ideas of each country. This is in response to the concept of the cultural community mentioned by President Xi Jinping in the "14th Five-Year Plan".

The Guizhou Provincial Government can encourage ethnic minorities to launch tea brands with their cultural characteristics while maintaining them. This will distinguish them from other ethnic groups regarding tea making technique and packing. The Guizhou Provincial Government can choose one or two brands for promotion abroad. Guizhou-promoted tea brands can be recombined and repackaged in combination with local cultural customs while maintaining their characteristics. For example, the United Kingdom is a major buyer of black tea. If the black tea in Guizhou is promoted in the United Kingdom, respecting United Kingdom's culture is imperative for local promotion and sharing. Moreover, the integration of Guizhou culture and the culture of the United Kingdom for promotion and sales, including the translation of words on the outer packaging, should be combined with local folk customs and culture.

Improve the Products Quality from the Source of Tea Industry in Guizhou

Compared with TWG, the range of tea picking has narrowed from the whole world to Guizhou province in the Yunnan-Guizhou Plateau, in low latitude and high altitudes. Tea gardens throughout the plateau are free of pollution under little sunshine and more clouds and fog. Guizhou province has implemented the policy of green tea garden. Glyphosate and water-soluble pesticides are prohibited. The green barrier is a non-tariff barrier in the main form of manifestation of environmental surcharge for green package system and the green label system. Importing countries apply restrictive measures on foreign products to protect the environment or the country's trade (Kong, 2021). The green barrier conforms to the current world ecological requirements. It will not disappear in the short term. If the government of Guizhou wants to make a breakthrough in export trade, they should achieve common cultural prosperity and provide specific guarantees on the source of tea. The government of Guizhou can choose one or two countries with green trade barriers for long-term cooperation. The product quality standard can be developed according to the destination countries, improving the quality of the Guizhou tea to some extent.

5. Discussion

5.1 New Tea in Digital Asia

Different groups such as tea plantations, tea enterprises, consumers, regulators or industry associations need information exchange and feedback. Digital methods let "information" become the keyword (Malyuk & Gavdan, 2019). The leaders need traceable-information and element-linked model to accurately obtain market demand (Awa et al., 2010).

Tea plantations: Improve the quality of raw materials in an environment-friendly and digital way

The quality of raw materials produced by tea plantations plays a key factor. The use of new technology can make high-quality products with low pollution and expand attractiveness. Tea plantations are a special agricultural ecosystem critically affected by human activities. Therefore, many natural resources need to be kept in the direction beneficial to human beings and many different elements, including tea trees, soil, weeds, pests, climate factors, fertilization, precipitation, irrigation, and soil characteristics. These may become important factors affecting ecological and economic benefits. More attentions to the information interaction between elements in this internal-circulated ecosystem need to be given to obtain organic products using normal conditions with lower pesticide residues while controlling costs. We need to use digital methods to achieve a more intelligent tea plantation system instead of a mechanized one.

Information interaction systems for tea plantations provide a way to visually display the quality of its raw materials. This may help consumers choose tea brands from a specific origin, cultivate consumer loyalty, and allow manufacturers to adjust their product line in advance. Unmanned aerial vehicles (UAVs) use various sensors to monitor soil's physical properties, climate data, plan-growing conditions (Wen et al., 2019), and even Plant Wearables (Yin et al., 2021). These UAVs could digitize the natural environment. For example, sensors enabling devices to communicate via internet can also be used in the agricultural field. The current agribusiness is more concerned about the information, accuracy, and prospects. Application of agricultural IoT technology is based on 5G networks (Guo, 2021). The Field Programmable Gate Array (FPGA) with development potential may help us strengthen the standardization of raw materials while reducing the constraints of natural conditions. Goods traceability can certify a high level of product value, veracity, and accessibility. It is defined as the ability to track and trace individual items throughout their lifecycle, from manufacturing to recycling (Benatia et al., 2018). QR code systems with a personal mobile terminal, Near Field Communication (NFC), and Radio Frequency Identification (RFID) may also help reduce information asymmetry and enhance the consumers' trust in certain tea brands (Bao et al., 2014; Zou & Yu, 2021).

Adjustable market strategy, partnership, and quality evaluation system

Similar to the tea marketing model in most areas of China, most tea enterprises in Guizhou use the traditional wholesale market model (Zhang & Xu, 2017). They set up special sales offices in the wholesale market. Any retailer or an individual consumer can buy products from these sales offices. To improve product price, brand, and quality, however, adequate consumer feedback channels are unavailable. A stronger information exchange and cooperation among tea enterprises may be beneficial for improving this situation. The tea industry association should promote tea producers to consciously abide by industry standards and enhance awareness in good faith. This form of cooperation may enable the tea industry to have a fairer market competition environment, and the tea brands will receive more supervision and stronger credibility. In addition to the collaboration among tea enterprises, many new technologies can make the quality evaluation system of tea products more progressive. This will help tea brands in getting the required data for the

development process. Tea quality evaluation using artificial intelligence (Patil & Bachute, 2021) may help reduce the difficulty of quantifying various parameters.

With the standardization of tea production and policy changes, industry analysts believe that bubble consumption of tea is gradually decreasing, and popular tea consumption such as tea beverages have been gaining more market share. The research shows that young consumers regard convenience of purchase, product selectivity, and ready-to-drink options as important factors. Young people's consumption concept tends to be rational, but with the enhancement of income and education, it is no longer limited to beverages. It also demands the brand and cost performance of the beverage (Lin et al., 2021). Guizhou high-quality tea leaves provide excellent raw materials for tea beverage processing.

Tea biochemistry has become a focus discipline on Camellia Sinensis (Wan et al., 2015). Miniature NIR spectroscopy and computer vision can help monitor the processing of black tea (Wang et al. 2021a). The potential application direction in tea processing is the dynamics of water-soluble pectin in the roasting process during green tea manufacturing (Hirono & Mizukami, 2018). Guizhou needs more cooperation with researchers on the tea science or agricultural colleges to combine application-potential technologies with production in time and adjust the production line and market strategy.

Product traceability and personalized service in a Big Data environment

With the improvement of science and technology, big data technology has become the new "oil" in the Internet era (Shang & Geng, 2020). Alvin Toeffler called it "the festivities in the third wave". In 2016, Guizhou Province became China's first national big data investigational sector. This provides a unique regional advantage for combining digital technology and agricultural production in Guizhou, especially in providing traceable tea products and personalized consumer services. There are problems in accurately tracing the origin of tea products. For example, harmful chemical residues from using pesticides and growth regulators are recorded in tea planting and processing. At present, most enterprises rely on independent management without a strong binding force. Brands need to provide better information channels for customers.

6. Conclusions

Patent protection influences a company's market value. In other words, protecting a company's patent determines success (Kim et al., 2018). Patent protection would be vital, and a registered trademark must be considered.

Guizhou government must cooperate with local brands, such as the Chinese brand named Zhuyeqing. The same goes for international companies such as TWG and Unilever, including invited experts from those companies. It would be beneficial for the government to choose a tea export company to enhance international profits and select different channels to sell the teas. Develop different market strategies for different kinds of partnerships. Set up a lead business model for partnerships, from the selling process to communication (Unilever Careers, 2021). Meeting the needs of the times, creating online shops, and cooperating with third-place marketplaces, domestic or abroad, such as JD.com, Alibaba, or Amazon. Establishing an online presence would only enhance these partnerships. Although there is a lot of traceability information provided by enterprises, there is no effective mechanism to supervise the authenticity of the information, let alone the inspection of third-party professional testing organizations, making it difficult for consumers to participate (Gao et al., 2021).

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